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ABSTRACT

Students experience learning in a diversity of cultural contexts. A study examined the way in which the causes and appropriate remediation of learning problems are conceptualized across cultures. Also, it explored Australian teachers' beliefs about a number of issues related to policy and practice in the education of students with learning difficulties. The study contrasts U.S. students who in experiencing mild learning problems are often described as having learning disabilities, with similar students in Australia who are described as having learning difficulties. Although the identified students are similar, there are significant differences between the concepts behind the labels which make examination of policies and practices in each context potentially useful. Data are reported from questionnaires completed by 597 educators from 128 elementary schools and 71 secondary schools: 279 principals, 217 support teachers, 642 elementary teachers, and 159 secondary teachers. An exploratory factor analysis, examining 3 factors (academic performance, behavioral characteristics, and cultural background), was conducted to identify the underlying orientations that were held by participants about the causes of learning difficulties. Results indicated no significant relationships between respondents' perceptions of the cause of learning disabilities and the processes they used to identify students. Further, for classroom teachers, there was a significant relationship between an academic and a behavioral orientation toward the cause of learning difficulties and the use of informal tests. Findings suggest that the impact of teachers' perceptions of their roles seems to be reflected in the relationship between perception of responsibility and the education of students with learning difficulties. (Contains 5 tables of data and 25 references.) (CR)

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Learning Disabilities or Difficulties: The Impact of Teachers' Conceptions on Identification, Assessment, and Instruction of Students with Reading Problems

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Abstract

Students experience learning problems in a diversity of cultural contexts. However, the way in which the causes and appropriate remediation of these problems are conceptualised varies across cultures. For example, in the US students who experience mild learning problems are often described as having learning disabilities. Similar students in Australia are described as having learning difficulties. Although the identified students are similar there are significant differences between the concepts behind the labels. These similarities and differences make examination of policies and practices in each context potentially useful. The category of learning difficulties may include children who experience problems because of their cultural, social or linguistic background. More importantly, it describes children's experiences, allowing inappropriate teaching or curriculum equal weight with endogenous factors. These students are excluded in the US definition. This study explored Australian teachers' beliefs about a number of issues related to policy and practice in the education of students with learning difficulties. Specifically it examined teachers' beliefs about the cause of learning problems (neurological impairment compared with environmental factors), their perception of who should be responsible for teaching students with learning problems (regular teachers or resources specialists) and the perception of benefits of various services (teacher consultation, regular class placement, or resource room placement) on the processes of identification, assessment and placement of students. Data are reported from questionnaires completed by 597 principals, class teachers and resource specialists in 199 schools.

Teachers' Beliefs about the Causes of Learning Problems, Responsibility for Teaching, and Benefits of Services within a Noncategorical Approach to Serving Students with Low Achievement

Although there are a number of definitions of learning disability (LD), the construct generally attributes problems in learning to an underlying purative neurological impairment, which means that LD children are in some way qualitatively different from other low achieving children who experience similar levels of failure. This neurological impairment is often operationally defined as a discrepancy between current achievement and potential, where potential is gauged by performance on an IQ test (Stanovich, 1991).

The suggested qualitative differences between LD low achievers and other generally low achieving students implies that LD students require specialised assistance. In terms of US policy and practice, LD students are eligible to receive special education services while generally low achieving students may receive support from specifically designated programs such as Title 1/ Chapter 1.

The traditional model of LD has been criticised from a number of perspectives. A series of studies conducted at the University of Minnesota suggested that students who were identified as LD were psychometrically little different from low achieving poor readers (Ysseldyke, Algozzine & Epps, 1983). Earlier, the same situation was noted by Kirk and Elkins (1975) in their study of children enrolled in Child Service Demonstration Centers. A series of more recent studies has indicated that the principal reading-related cognitive problem is the same for both LD and low achieving poor readers, that is, a difficulty in phonological processing (Fletcher, Shaywitz, Shankweiler, Katz, Liberman, Stuebing, Francis, Fowler, & Shaywitz 1984; Stanovich, 1988). Similarly, in the area of learning problems in mathematics, Russell and Ginsburg (1984) stated that "many LD students rather than suffering from fundamental deficits are essentially cognitively normal" (p. 243). Others have suggested that identification of students as LD is driven by funding and policy pressures rather than the cognitive characteristics of the students. For example, Hocutt, Cox, and Pelosi (1984), found that identification of students as LD, educably mentally retarded (EMR), or emotionally disturbed (ED) was strongly influenced

by the policies of the local education authority (LEA). The major influences on these policies were "federal and state laws and regulations, funding amounts and formulas, professional philosophy/training, and the characteristics of the students served by a school" (p. 2).

Finally, several researchers have raised concerns over LD as a category of disability because of substantial overlap in the characteristics of students who are identified as LD and students identified in other categories of mild disability. A number of researchers have shown that it is extremely difficult to differentiate with an acceptable level of reliability between students identified as LD, EMR and ED (Lilly, 1977; Hallahan and Kauffman, 1977; Sherry, 1982).

In addition to difficulty related to classification of students as LD, concern has also been expressed with difficulty in linking LD with specific instructional interventions. Effective methods correspond to individual students' behavioural and cognitive characteristics. Given the overlap in student characteristics, there is substantial overlap in effective instruction for students identified as having a mild disability (Algozzine, Algozzine, Morsink, & Dykes, 1984; Morsink, 1984). At the same time the heterogeneity of students identified as LD means that some instructional interventions are successful with some LD students but not others (Morsink, Thomas, & Smith-Davis, 1987). Finally, effective instruction for LD students is fundamentally the same as effective for normally-achieving students. Scruggs and Mastropieri (1992), for example, identified a range of effective instructional strategies for mildly handicapped students placed in mainstream classrooms which are generally the strategies recommended for non-disabled students.

The questioning of the LD category has occurred in a context of dramatic change in the nature of special education services as a whole. The inclusion movement has advocated that all students regardless of the nature of their disability should have access to regular classrooms, hence, the provision of consultancy services to the class teacher appears to be a more efficient and effective than provision of resource services in pull-out settings to individual students (Elliott & Sheridan, 1992). Indeed, a major policy address by the then Assistant Secretary for the Office of Special Education and Rehabilitative Services, US Department of Education (Will, 1986) questioned the "presumption that students with learning problems ... need to be 'pulled-out' into special settings where they can receive remedial services" (p. 412). She argued that such an

approach frequently placed barriers to children's successful education and that the language of the educational system was "full of the language of separation, of fragmentation, of removal" and as such represented a "flawed vision of education for our children" (p. 412). Declaring that some children, but not others, are eligible for special education means that many children who did not fit into "compartmentalised" special education programs may not receive the services they needed.

The stigmatizing practice of labelling children who have learning problems as "disabled" has also led to problems. Some writers have suggested that noncategorical programs can provide flexible and effective instruction to meet the needs of all students (Marston, 1987; Morsink, Thomas, & Smith-Davis, 1987; Reynolds, Wang, & Walberg, 1987; Vallecorsa, 1983; Wang & Birch, 1984). Criticisms of traditional categorical approaches to the education of LD students have resulted in an increasing number of attempts to implement programs that do not rely on student labelling (Reynolds, & Lakin, 1987). In some cases, noncategorical programming has gone beyond the elimination of traditional special education categories to the integration of a range of services including special, compensatory and regular education (Fink, 1992).

The Australian education context provides an illustration of these policy directions to minimize the impact of labelling and emphasize the importance of inclusionary practices. The concept of learning disabilities has never had the policy affirmation embedded in the US legislation PL 94-142 and IDEA. Rather, the term "learning difficulties" has been used to signify the distinction in orientation (Elkins, 1983). In Australia, learning difficulties are defined as problems in learning that vary in cause, nature, intensity, and duration and arise from the way in which students learn, or the rate at which learning occurs. Social and cultural factors are acknowledged as potential sources of learning difficulties. Learning difficulties are seen as problems experienced by students arising from a diversity of factors, particularly factors outside the individual. Rather than being inherent characteristics of the individual they are often seen as transient, appearing and disappearing depending on the educational experiences of the student.

Thus, Australian education policy makers have adopted a noncategorical approach to provision of services, overcoming the concerns expressed by Will (1986) that categorical systems result in the fragmentation of services where children receive support based on classification of disability rather than the specific learning problems being experienced by the

child. According to the policy, support teachers can provide assistance to any student experiencing difficulty and specialist programs are available only for students from non-English speaking backgrounds who need help to master English.

The policy examined in our study strongly endorsed a consultative model of intervention. It reinforced the consultative model by focussing on the location of responsibility for meeting the educational needs of students with learning difficulties with the classroom teacher and with the school as a whole. While the policy does not attend to definitional issues related to identification of students with learning difficulties, it does emphasise the notion that learning problems are not necessarily permanent or intrinsic characteristics of the student. Implicit in the policy is the notion that teachers' beliefs about the causes of learning difficulties will influence the way in which support is provided to students. There is a coherent logic in this approach. If learning problems are seen to result from some neurologically-based impairment then students' learning needs are likely to be qualitatively different from students who are progressing normally. Thus, support for the students with a disability should be provided by specialist teachers. If learning problems are seen to arise from a diversity of environmental factors which may temporarily affect a large number of students from time to time, then students' learning needs are likely to be quantitatively different from those of other students. In this case, provision of services does not necessarily require specialist knowledge of students' disabilities. The policy reinforces this view by endorsing provision of services within the regular classroom and by making the explicit statement that the responsibility for these students resides with the class teacher. The policy implies that perception of responsibility will affect the type of services available to students. Moreover, it endorses an instructionally focussed approach to identification and assessment. Australian teachers, therefore, are encouraged to use identification and assessment methods which would attend to students' instructional needs rather than diagnose a category of disability. The emphasis is on informal, classroom-based assessment and direct observation of students by the teacher.

While Australian policy may promote a different model of LD, Australian educators and researchers have nevertheless been strongly influenced by US policy, research and scholarship. Some scholars would accept that within the group of Australian students experiencing learning difficulties, there are some students who would meet typical U.S. criteria for LD services, but no

more than 2 or 3% of an age cohort. Thus, the field of learning difficulties reflects a range of professional theories, beliefs, attitudes, and practices related to the nature, cause, and most effective treatment of learning problems. Hence, this study investigated the impact of practitioners' belief systems on school practices and processes related to the identification, assessment, and provision of services for students experiencing learning difficulties.

Specifically, it was expected that participants' beliefs about the cause of learning difficulties and who should hold responsibility for educating students with learning difficulties (class teacher versus support teacher) would influence the way in which students were identified, and assessed (informal tests and observation versus standardized assessment), and the role of assessment information in instructional planning. It was also anticipated that beliefs about the cause of learning difficulties and who should be responsible for teaching would affect the provision of services (consultation with class teacher, in class tutorial or pullout programs).

Method

Participants

Participants were 597 educators, drawn from 199 schools in one state. Information was collected from 279 principals, 217 support teachers, 642 elementary teachers, and 159 secondary teachers. However, for a school to be included in the analysis, it was necessary to have responses from the principal, a support teacher, and at least two class teachers in the school. There were 128 elementary schools and 71 secondary schools in the database.

Principals were asked to indicate the socioeconomic background of students. Seventeen reported that students' backgrounds were "well below average", 28 percent indicated "below average", 39 percent indicated "average", 13 percent indicated "above average", and three percent indicated "well above average".

Instruments

The data reported in this study were collected as part of a project to evaluate a state policy on support for students with learning difficulties. Separate questionnaires were developed for principals, support teachers, and class teachers. Each questionnaire sought demographic information and responses on a range of issues related to the education of students with learning difficulties including: the nature, duration, extent, and outcome of services; processes related to identification, assessment, and curriculum planning for students with learning difficulties, and

beliefs and attitudes about the nature, cause, and most appropriate treatment of learning difficulties.

Perceptions of causes of learning difficulties were obtained by asking respondents in each group (i.e., principals, support teachers, class teachers) to rate the importance of 13 potential causes. Responses were recorded on a five-point Likert scale ranging from very important (1) to very unimportant (5). The items were: (a) problem behaviour , (b) the cultural background of the student, (c) poor attention in class, (d) the lack of ability in particular areas (e.g., mathematics or reading), (e) non-English speaking background, (f) general low intellectual ability, (g) information processing difficulties, (h) lack of parental support, (i) poor attitude or lack of effort, (j) poor teaching in previous years, (k) minimal brain dysfunction, (l) low self-concept or self-esteem, and (m) auditory or visual discrimination problems.

The allocation of responsibility for students with learning difficulties in the school was examined by the question, "In your school, how much responsibility does each individual have for meeting the needs of students with learning difficulties?" Participants gave responses for the level of responsibility held by the class teacher, support teacher, school executive, school community and other responses were made on a five-point Likert scale by assigning responsibility according to the following statements: no, little, about half, major, and total responsibility.

Items requesting information on identification, assessment for provision of services, and assessment for planning instruction had common options, although the question stems varied according to the issue. Participants responded on a five-point Likert scale with designated points of never, rarely, about half the time, often and always. The common core was: Observation of student in classroom by (a) class teacher, (b) support teacher, or (c) school executive; Student performance of classroom tests given by the (a) class teacher, (b) support teacher, or (c)school executive; standardised tests administered by the (a) class teacher, (b) support teacher, or (c) school executive.

When assessing the provision of services, teachers we asked to indicate the number of students who received consultancy, classroom tutorial, and pull-out services. They were also asked to indicate the percentage of students who received no, little, noticeable, or great benefit from each of these services.

Support teachers' level of training was assessed by asking support teachers to indicate whether they had received; no specific training, short inservice programs, or college-level training of at least one semester's duration in: (a) identification and assessment, (b) instructional planning, (c) providing special instructional programs in mathematics, reading, behaviour management, and social skills, (d) program evaluation, (e) consultation techniques, and (f) team teaching techniques.

Where possible all principals, support teachers, and class teachers were asked corresponding questions. However, because of the need to minimise response time, questions were omitted if it appeared likely that a particular group of respondents would not have access to particular information. All participants were asked their perception of benefit of services and the allocation of responsibility for educating students with learning difficulties. Only class teachers were asked to describe the processes involved in identification of students, and class and support teachers were asked about assessment for eligibility for services and curriculum planning.

Procedure

One principal, one support teacher, and four teacher questionnaires were sent to 745 schools. This represented approximately one third of the schools in the state. Principals were asked to distribute questionnaires according to a formula for selecting teachers to ensure the randomness of the sample. Approximately one month following the distribution of the questionnaires, school principals were contacted by a member of the research team to follow up on the return of questionnaires.

To examine the dynamic processes that occur between various staff in schools, a school level database was constructed according to the responses from the principal, support teacher, and at least two teachers.

Results

Causes of Learning Difficulties

An exploratory factor analysis was conducted to identify the underlying orientations that were held by participants about the causes of learning difficulties (Table 1). Three factors were extracted and rotated according to a varimax solution with eigenvalues greater than 1.0. These reflected causes related to academic performance, behavioral characteristics, or cultural background of the student.

Insert Table 1 about here

The relationship between the three cause factors and the processes related to the identification, assessment and education of students with learning difficulties was examined using multiple regression analysis. The three cause factors were used as predictors when examining the processes involved in identification, assessment, educational planning for students, and the nature of services provided to students, and respondents' perceptions of the benefits of those services.

Responses for support and class teachers were analysed separately. Because of the multiple tests for each independent variable, a conservative cut-off was established using the Bonferroni adjustment. The critical p was set at .005 by dividing .05 by the number of tests for each dependent variable. Statistically significant results for this series of tests are given in Table 2.

Insert Table 2 about here

Table 2 indicates that there were no significant relationships between respondents' perceptions of the cause of learning difficulties and the processes they used to identify students. For classroom teachers there was a significant relationship between an academic and a behavioral orientation toward the cause of learning difficulties and the use of informal tests by the class teacher. These relationships accounted for six percent of the variance in the case of academic focus and seven percent of the variance in the case of behavioral focus. The same pattern of results held for the use of standardized tests by the class teacher, academic orientation accounting for eight percent of the focus and behavioral focus accounting for five percent of the variance. In the case of classroom teacher reports, there was also a relationship between an academic focus toward learning difficulties and the use of informal test for planning instruction.

A slightly different pattern of results emerged for support teachers. There was a significant relationship between reports of the use of observation by the class teacher and a behavioural focus for both assessment of learning difficulties and planning of instruction.

Responsibility

Because of the inconsistent and small number of significant results of the analysis around the three cause factors, other factors identified by the policy as impacting on school practices were examined beginning with perceptions of responsibility for the education of students with learning difficulty. Initially, the differences between support and class teacher reports of who exercises responsibility were analysed using a series of *t* tests. To compensate for the multiple tests a cut-off of $p = .012$ was set for a 95 per cent confidence interval. All comparisons were significant (see Table 3). As can be seen in the table, each group (classroom teachers and support teachers) believed that they, themselves, were responsible for the educaion of students with learning difficulties. Both groups, however, perceived that the school executive and community played a minor role. It is interesting to note that support teachers rated the classroom teacher as having the least responsibility.

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insert Table 4 about here

A series of multiple regressions was conducted using the allocation of responsibility for students with learning difficulties (to class and support teachers, school executive, school community) as predictors of the processes used to identify, assess for eligiblity for services, and develop educational plans for students with learning difficulties, the perception of the benefits of various services as well as the provision of services to students supported through teacher consultation, in-class tutorial and pull-out services. Due to the differences between class and support teachers, separate analyses were conducted where both support and class teachers responded to the same question. Table 4 provides the significant relationships between reports of who holds responsibility for students with learning difficulties and processes of identification, assessment, planning and perception of benefit of various services. There were no significant relationships between responsibility and provision of consultation, in-class tutorial or pull-out services.

Insert Table 4 about here

Table 4 indicates that there were a number of significant relationships in data reported by class teachers. There was a consistent relationship between perceptions that support teachers hold responsibility for students with learning difficulties and the collection of information about the student by the support teacher. Observation by the support teacher, the use of informal and standardized tests by the support teacher were significantly related to perceptions that the support teacher held responsibility for students in relation to identification, assessment and planning for instruction.

There were surprisingly few relationships between class teachers' reports of their own responsibility for students with learning difficulties and the processes of identification, assessment and planning used by the school. Teacher reports of their own responsibility were related to the use of observation by the class teacher in planning instruction and to the perception that in-class tutorial services were beneficial.

There were very few significant relationships in the perception of responsibility reported by support teachers and the issues of practice explored by the study. There was a relationship between perception that the executive holds responsibility and assessment based on observation by executive personnel, and perception of benefit of consultation services. There were also significant relationships between the perception that the classroom teacher holds responsibility and the use of standardized tests by the class teacher for assessment and the perception that consultation to provide services to students was beneficial. The amount of variance explained by these relationships ranged from two to 12 percent.

Perception of Benefits of Services, Teacher Training, and Workloads

Given the lack of expected relationships between the nature of services provided to children, and perception of responsibility and perceived benefits of services, other more pragmatic issues were examined, once again using multiple regression analysis.

Table 5 provides the significant relationships between perception of benefits of specific types of services and support teacher load, and provision of services. There were no significant relationships between the level of training received by support teachers and provision of services.

Insert Table 5 about here

Table 5 indicates that reports of the perceptions of benefits of consultation by class teachers was significantly related to the number of students served through in-class tutorial arrangements. Perception of benefits of in-class tutorials was related to the number of students served through pull-out arrangements. There were no significant relationships in data reported by support teachers.

Finally, the support teachers' workload was examined. Support teacher load was computed by dividing the school enrolment by the amount of support teacher time available in the school. Table 5 shows that there was a small significant relationship between support teacher load and the use of consultation services.

Support teacher loads varied substantially between schools. A few schools had excellent staffing. For example, 10% of schools have the equivalent of one support teacher for 280 students or better. However, staffing in many schools was very poor. For example, more than 50% of schools had one support teacher to 655 students or more. With the exception of schools with no support teacher, the staffing of the poorest 10% of schools ranged from one support teacher to 1,308 students to 1:18,900 students.

Written comments supplied with the questionnaires indicated that not only did many support teachers feel that a number of students were disadvantaged because of lack of services accompanying high workloads but that the strain of excessive workloads impacted seriously on their professional and personal well being.

> "In a school this size (1607) and only appointed 4 days/week, it is impossible to deliver a service which I feel really makes a difference."
>
> "Large proportion of children who are having learning difficulties due to a wide variety of reasons. I don't seem to have enough hours in the day to help these kids (to my satisfaction)."
>
> "Not enough time to be able to set up individual programs nor serve all the needs of the children."
>
> "Very little time allocated to support teaching - impossible to provide a service that is equitable or productive."
>
> "while it is fairly easy to identify those students (always some who escape the system) trying to cater for student needs is a nightmare - a case of too little, too late."

"There has been no provision in staffing levels to accommodate high numbers of LD students enrolling from other schools - incredible strains on staff and resources."

"I felt it is like applying a bandaid to a gaping wound. Each teacher demands priority of their children and I list the children needing immediate help but the list grows longer each year."

"Because of the number of children with learning difficulties and the limited time available, teacher consultation is the only option."

Discussion

The policy on support for students with learning difficulties adopted a noncategorical approach to the identification of students with mild behavioral and learning problems and strongly endorsed provision of services within the regular classroom environment, preferably through consultation with the regular teacher.

Two conceptual issues related to the notion of learning difficulties were presented as the basis for the policy directions. First, learning difficulties were seen as transient and flexible characteristics of children which were caused by a multiplicity of factors related both to the nature of the student and to the nature of the environment in which the student grows and develops. Second, the policy stated explicitly that the responsibility for educating these students must reside with the class teacher, and to a lesser extent the school community.

Causes of Learning Difficulties

The results of the factor analysis suggest that in seeking to understand the causes of learning difficulties, teachers focused on academic concerns, behavioral concerns or concerns related to students' social/cultural background. In formulating the items related to perception of cause it was felt that some respondents may hold beliefs that were consistent with a "disabilities" focus (eg. minimal brain dysfunction) while others would hold beliefs consistent with a "difficulties" orientation (eg. cultural background of student; poor teaching). However, the factor analysis did not support this distinction. This suggests that for teachers the day-to-day realities in the classroom are more immediate and compelling than theoretical notions. It also suggests that policy attention to conceptual issues related to the underlying cause, duration and nature of students' reading problems may be largely irrelevant to class teachers.

Not only do teachers' perceptions of the cause of learning difficulties not follow the proposed theoretical framework, they do not appear to impact in any meaningful way on practices in schools. The relationship between the three cause factors and procedures and services for students with learning difficulties was rarely significant. More significant relationships were found in the class teacher data than in data reported by support teachers. Class teachers indicated that they were more likely to use informal and standardized tests to assess children with academic difficulties and to use informal tests to plan for these children. The relationship was in the opposite direction when assessing children with behaviour problems. Once again reports from class and support teachers differ. Support teachers report that class teachers are more likely to assess and plan for students with behavioural problems using their own observations.

There is some coherent logic in this pattern of relationships. Class teachers are probably more likely to use observations to assess children with behaviour problems and some form of systematic testing with children experiencing academic problems. But the data leave a number of issues unresolved. There is no indication of the support teachers' role in the process. Neither is it clear how these groups of children are identified, and what can account for the instructional intervention which is implemented.

Allocation of Responsibility

The policy paid particular attention to the issue of who should hold responsibility for the education of students with learning difficulties to facilitate the inclusive agenda promoted by the policy, it mandated that responsibility should be held by the regular class teacher and the school community.

The consistent differences between class and support teachers as to who held responsibility for students with learning difficulties is particularly interesting. The school community was reported to be least responsible by both groups of participants with the exception of the support teachers' reports of class teachers' responsibility. This perhaps reflects the somewhat illusive concept of a school community. Once again the utility of policy attention is questionable.

The class and support teachers' reports of the responsibility held by each other were inversely related. Class teachers reported that they held most responsibility. On the other hand

support teachers' reported the class teachers' level of responsibility as lowest. They ranked themselves as holding the highest level of responsibility. Given that the policy is clearly seeking to shift responsibility toward regular classrooms, support teacher perceptions could possibly be seen as constraining policy implementation.

The impact of teachers' perception of their role seems to be reflected in the relationship between perception of responsibility and the education of students with learning difficulties. In contrast to the perception of the causes of learning difficulties, a consistent pattern of results did emerge between reports of responsibility for students with learning difficulties and identification, assessment, planning for instruction. The relationship between perception of responsibility and provision of services for students gave a slightly different pattern of results. Class teachers' reports of the level of responsibility held by support teachers is consistently related to support teachers' active participation in the identification, assessment and planning of instruction. However support teacher reports do not reflect a similar pattern. Support teacher reports of the level of responsibility they exercise were not significantly related to their participation in processes of identification, assessment and planning. Similarly there is a lack of relationship between class teacher reports of responsibility and their own participation in processes, with the exception of classroom observation by class teacher for instructional planning.

In relation to the benefits of services class teachers' perception of the level of their own responsibility was related to the perception of benefits of direct services in the classroom and support teachers' perception of class teachers' responsibility was related to perception of benefits of consultative services.

This set of relationships poses an intriguing puzzle. The consistency of findings across various activities as well as the conservative cut-off points suggests that the pattern of relationship reflects beliefs and practices as they occur in schools. However, the failure of the relationship between perception of responsibility and practices, to extend to the provision of services is of concern. Attitudes toward the cause of learning difficulties and perception of responsibility were the two key facets of the policy in endorsing consultation and in-class forms of intervention. Yet these two issues appear to be irrelevant to the types of services provided to number of students receiving various forms of services.

Although a consistent pattern of results did emerge, the limited number of significant

results is perhaps surprising. It is logical to expect that perception of who is responsible for the education of students will translate into procedures in practice. Certainly the logic of this assumption was central in framing the policy. Although the logic seems to be reflected in relation to class teachers' perception of the level of responsibility exercised by support teachers and the subsequent participation of support teachers in identification, assessment and planning. It did not hold in relation to class teachers' participation in those activities or in relation to support teachers' perceptions of either their own or class teachers' participation in those activities. Further the consistent relationship related to class teachers' perceptions extends to views on the benefits of various types of services but does not extend to provision of services.

It is also possible that the data reflect a different causal direction. In other words, perception of responsibility does not predict participation in educational processes. Rather active participation predicts reports of responsibility. If this is the case, then the focus of policy on issues of who should hold responsibility is, perhaps, somewhat otiose.

Pragmatic Factors

Given the limited utility on the policy focus on causes and responsibility for educating students with learning difficulties in predicting the nature of services for students, other issues available in the database were explored.

Benefits of Services. It is logical to expect that teachers' perception of the utility of services will be reflected in practices in schools. To some extent this is reflected in the class teacher data. However, the relationship is not clear-cut. There was a relationship between perception of benefits of consultation and the number of students served through in-class tutorials, and between benefits of in-class tutorials and provision of pull-out services. However, although the relationships are significant, they are by no means strong, each accounting for roughly 20 percent of the variance.

As with other relationships in the database, class teacher data were significant while relationships between the perceptions of support teachers and practices in schools were not significant. This suggests that the belief systems of class teachers may have a substantial impact on the roles played by support teachers in schools.

Support Teacher Training. It is surprising, that the level and areas of training for support teachers appeared to have a minimal, and not statistically significant impact on school

processes. This finding certainly deserves further investigation.

Teacher Load and Provision of Services. Given the inconsistent results contained in previous analysis, the impact of teacher load was thought to perhaps provide a pragmatic explanation where proposed theoretical relationships failed. The level of support teacher staffing did vary substantially between schools. Some schools were well staffed while others experienced very low levels or no support. Some support teachers indicated that their heavy student loads meant that teacher consultation was the only realistic option available to them. This may partially explain the pattern of results. Above a certain load, teacher consultation becomes the only means of meeting the demand for services. Therefore, a significant relationship was obtained between load and consultation services. However, where loads are not excessive a diversity of factors account for services. Therefore, load was not significantly related to direct in-class or pull-out services.

In summary, the data represent a perplexing picture. Fundamental aspects of the policy focussing on perception of cause of learning difficulties and location of responsibility for provision of services do not seem to impact in any significant way on provision of services. Some pragmatic issues, perception of the benefits of services and support teacher load appear to contribute in a limited way to the nature of services delivered to students. However, despite the extensive data that were collected in the study, the most influential factors in accounting for the nature and extent of services at the school site appear to remain undisclosed.

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Table 1
Factor Analysis of Respondents' Perceptions of Cause of Learning Difficulties

Factor 1 Academic		Factor 2 Behavioral		Factor 3 Cultural	
	Factor Loading		Factor Loading		Factor Loading
Auditory or visual discrimination problems	.77	Behaviour problems or anti-social behaviour	.81	Cultural background of student	.83
Information processing difficulties	.77	Poor attention or concentration in class	.76	Non-English speaking background	.78
Minimal brain dysfunction	.76	Poor attitude or lack of effort	.74		
General low intellectual ability	.74	Lack of parental support	.63		
Poor teaching in previous years	.50	Low self-concept or self-esteem	.60		
Lack of ability in particular areas	.46				

Table 2
Significant Relationships ($p<.005$) between Cause Factors, and Assessment and Planning for Students with Learning Difficulties

	Respondent									
	Class Teacher					Support Teacher				
	Cause Factor	F	R^2	β	r^2	Cause Factor	F	R^2	β	r^2
Assessment		$df_{(3,140)}$					$df_{(3,108)}$			
Observation by: class teacher, support teacher, school executive						Behaviour	4.8	.12	.36	.05
Informal tests by: class teacher	Academic	3.9	.08	.55	.06					
	Behaviour	3.9	.08	-.56	.07					
support teacher, school executive										
Standardized tests by: class teacher	Academic	4.2	.08	.62	.08					
	Behaviour	4.2	.08	-.43	.05					
support teacher, school executive										
Planning		$df_{(3,141)}$					$df_{(3,116)}$			
Observation by: class teacher, support teacher, school executive						Behaviour	6.8	.15	.48	.08
Informal tests by: class teacher, support teacher, school executive	Academic	3.3	.07	.53	.06					
Standardized tests by: class teacher, support teacher, school executive										

Table 3
Means and Significance Tests for Class and Support Teachers' Perception of Who Holds Responsibility for the Education of Students with Learning Difficulties

	Class Teacher		Support Teacher				
Person Holding Responsibility	M	SD	M	SD	t	df	p
Class teacher	3.9	.98	1.6	(.45)	6.85	395	<.001
Support teacher	2.9	(.72)	3.7	(.61)	10.27	(361)	<.001
School executive	2.4	(.64)	2.6	(.9)	2.73	(362)	.007
School community	1.8	(.48)	2.0	(.79)	3.09	(353)	.002

Table 4
Significant Relationships ($p<.005$) Between Perception of Responsibility and Identification, Assessment, Planning, and Perception of Benefits of Services.

	Respondant									
	Class Teacher					Support Teacher				
Process	Person[a]	F	R^2	β	r^2	Person[a]	F	R^2	β	r^2
Identification		df(4,143)					df(4,114)			
Observation by:										
class teacher	executive	3.1	.08	.31	.07					
support teacher	ST[a]	10.2	.22	.42	.04					
executive	executive	7.6	.18	.33	.08					
Informal Tests by:										
class teacher										
support teacher	ST	9.4	.21	.39	.14					
executive										
Standardized Tests by:										
class teacher										
support teacher										
executive	ST	8.4	.19	.44	.18					
Assessment		df(4,146)					df(4,114)			
Observation by:										
class teacher										
support teacher	ST	4.6	.11	.31	.09					
executive	executive	6.2	.15	.39	.11	executive	3.0	.1	.29	.07
Informal tests by:										
class teacher										
support teacher	ST	5.7	.14	.35	.11					
executive										
Standardized tests by:										
class teacher						CT[b]	4.21	.13	.26	.06
support teacher	ST	7.8	.18	.40	.15					
executive										
Planning		df(4,144)								
Observation by:										
class teacher	CT	4.95	.12	.23	.05					
support teacher	ST	14.9	.29	.54	.26					
executive										
Informal tests by:										
class teacher										
support teacher	ST	11.1	.24	.49	.21					
executive										

	Respondant									
	Class Teacher					Support Teacher				
Process	Person[a]	F	R^2	β	r^2	Person[a]	F	R^2	β	r^2
Standardized tests by: class teacher support teacher executive	ST	7.27	.17	.38	.13					
Perception of Benefit of Services		df(4,94)							β	r^2
Consultation						C T	2.91	.36	.24	.2
						Executive	2.91	.36	.42	.12
In-class	C T	3.51	.08	.21	.13					
Pull-out										

a person holding responsibility b ST support teacher c CT class teacher Table 4 cont'd

Table 5
Significant Relationships ($p<.017$) between Perception of Benefits of Services and Support Teacher Load, and Number of Children Receiving Services

	Respondant								
	Class Teacher					Support Teacher			
Services [a]	Perception of Benefit of Services	$F_{(3,95)}$	R^2	β	r^2	Services			
Consultation									
In-class	consultation	3.4	.1	.22	.19				
Pull-out	in-class	3.5	.1	.26	.23				
Support Teacher Load							$F_{(1,187)}$	R^2	ß	r^2
Consultation							6.13	.18	.18	.03
In-class										
Pull-out										

[a] Type of services provided to students